

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1 1. (Currently Amended) A system comprising:
2 one or more probes configured to be positioned inside a heart of a patient;
3 a processor communicatively coupled to the one or more probes, the
4 processor being used to process electrical information pertaining to the heart, the
5 electrical information being sensed using the one or more probes;
6 a display communicatively coupled to the processor, the display being
7 used to display an image of the heart;
8 image processing tools which are used by the processor to manipulate the
9 image; and
10 a macro that when activated causes the system to acquire a final vitals
11 measurement of the heart, print a report, and to stop recording electrical
12 information of the heart.

1 2. (Original) The system of claim 1, wherein the image is acquired using a
2 computed tomography imaging system, a magnetic resonance imaging system, an
3 ultrasound imaging system and/or a positron emission tomography imaging system.

1 3. (Original) The system of claim 1, wherein the processor is used to process
2 position information which pertains to the position of at least one of the one or more
3 probes positioned in the heart.

1 4. (Original) The system of claim 3, wherein the position information is used to
2 create a structural map of the heart.

1 5. (Original) The system of claim 1, wherein the image processing tools include
2 at least one of a volume rendering tool, a virtual endoscope tool, a coronary vessel
3 analysis tool, an image reconstruction tool, and an image segmentation tool.

1 6. (Original) The system of claim 1, wherein the image is acquired prior to the
2 probe being positioned in the heart.

1 7. (Original) The system of claim 1, wherein the image is constructed based on
2 a plurality of image slices each of which represents a cross sectional slice of the heart,
3 and wherein the image processing tools are used to manipulate the image by
4 manipulating the plurality of image slices.

1 8. (Currently Amended) A computer based system comprising:
2 electrophysiology monitoring logic which is used to monitor and control
3 one or more probes positioned inside a heart; the one or more probes being used to sense
4 electrical information pertaining to the heart;

5 mapping logic which is used create a structural map of the heart by
6 determining the position of at least one of the one or more probes inside the heart; and
7 image processing logic which is used to manipulate an image of the heart;

8 and

9 a macro that when activated causes the system to acquire a final vitals
10 measurement of the heart, print a report, and to stop recording electrical information of
11 the heart.

1 9. (Original) The system of claim 8, wherein the image is a computed
2 tomography image, magnetic resonance image, ultrasound image and/or positron
3 emission tomography image.

1 10. (Original) The system of claim 8, wherein the image processing logic
2 includes at least one of the following types of logic: volume rendering logic, virtual
3 endoscope logic, image reconstruction logic, and image segmentation logic.

1 11. (Original) The system of claim 8, further comprising reporting logic which is
2 used to create a report which includes the electrical information and the image.

1 12. (Original) The system of claim 8, wherein the electrophysiology monitoring
2 logic comprises pacing logic which is used to pace the heart.

1 13. (Original) The system of claim 8, wherein the image is a three dimensional
2 image.

1 14. (Currently Amended) A system comprising:
2 one or more probes configured to be positioned inside a heart, at least one
3 of the one or more probes being used to sense electrical information pertaining to the
4 heart; and

5 a data processing system communicatively coupled together and
6 communicatively coupled to the one or more probes, the data processing system being
7 configured to store position information pertaining to a position of at least one of the one
8 or more probes, the data processing system also being configured to store an image of the
9 heart and image processing tools;

10 wherein the image processing tools are used to manipulate the image the
11 image processing tools including a segmentation tool to isolate an area of interest in the
12 image from other portions of the image, and a contour tracking tool operable to trace an
13 external surface of a structure on parallel planes using a cursor.

1 15. (Original) The system of claim 14, wherein the image is acquired using a
2 computed tomography imaging system, a magnetic resonance imaging system, an
3 ultrasound imaging system and/or a positron emission tomography imaging system.

1 16. (Original) The system of claim 14, wherein the data processing system uses
2 the position information to create a structural map of the heart.

1 17. (Original) The system of claim 14, wherein the image processing tools
2 include at least one of a volume rendering tool, a virtual endoscope tool, an image
3 reconstruction tool, and an image segmentation tool.

1 18. (Original) The system of claim 14, wherein the image is a three dimensional
2 image.

1 19. (Currently Amended) A combination system comprising:

2 an electrophysiology monitoring system which is configured to be
3 communicatively coupled to one or more probes positioned inside a heart, the one or
4 more probes being configured to sense electrical information pertaining to the heart;

5 an electrophysiology three-dimensional mapping system which is
6 configured to receive position information pertaining to the position of the one or more
7 probes, the position information being used to create a three-dimensional structural map
8 of the heart, the electrophysiology monitoring system and the electrophysiology three-
9 dimensional mapping system being communicatively coupled together, wherein the
10 mapping system is configured to generate a display of a first and a second marker
11 representative of respective first and second probes, the first marker of a first color in
12 correlation to a first activation time of the heart and the second marker of a second color
13 in correlation to a second activation time different than the first activation time;

14 image processing logic which is used to manipulate an image of the heart.

1 20. (Original) The system of claim 19, wherein the image processing logic
2 includes at least one of the following types of logic: volume rendering logic, virtual
3 endoscope logic, image reconstruction logic, and an image segmentation tool.

1 21. (Original) The system of claim 19, wherein the image is a computed
2 tomography image, magnetic resonance image, ultrasound image and/or positron
3 emission tomography image.

1 22. (Original) The system of claim 19, wherein the combination system is
2 configured to generate a report which includes the image.

1 23. Cancelled.